User's Guide

Index

Introduction to Digital Video Recorder----------2
Front panel buttons----------3
Rear panel buttons ----------4
DVR installation:video output connection----------5
DVR installation:video input connection----------5
DVR installation:sensor installation----------6
DVR installation:alarm installation----------7
Power up the unit ----------8
On-screen display----------9
Operation guide:Main menu----------10
Operation guide:Camera select----------10
Operation guide:Record select----------11
Operation guide:Record mode----------11
Operation guide:Record frame-rate----------12
Operation guide:Video quality----------13
Operation guide:Record schedule----------14
Operation guide:Sub menu-password change--------15
Operation guide:Sub menu-time set----------16
Operation guide:Sub menu-audio record----------16
Operation guide:Sub menu-display format----------16
Operation guide:Sequential time----------16
Operation guide:Auto record----------16
Operation guide:Video loss beep----------17
Operation guide:Brightness adjustment----------17
Operation guide:HDD setup ----------17
Operation guide:Sensor setup ----------18
Operation guide:How to start motion detection-------20
Operation guide:Playback ----------21
Optional functions:Networking setup----------23
Appendix I Regulatory ----------24
Appendix II PC viewer application----------25
Appendix III PC client application----------28

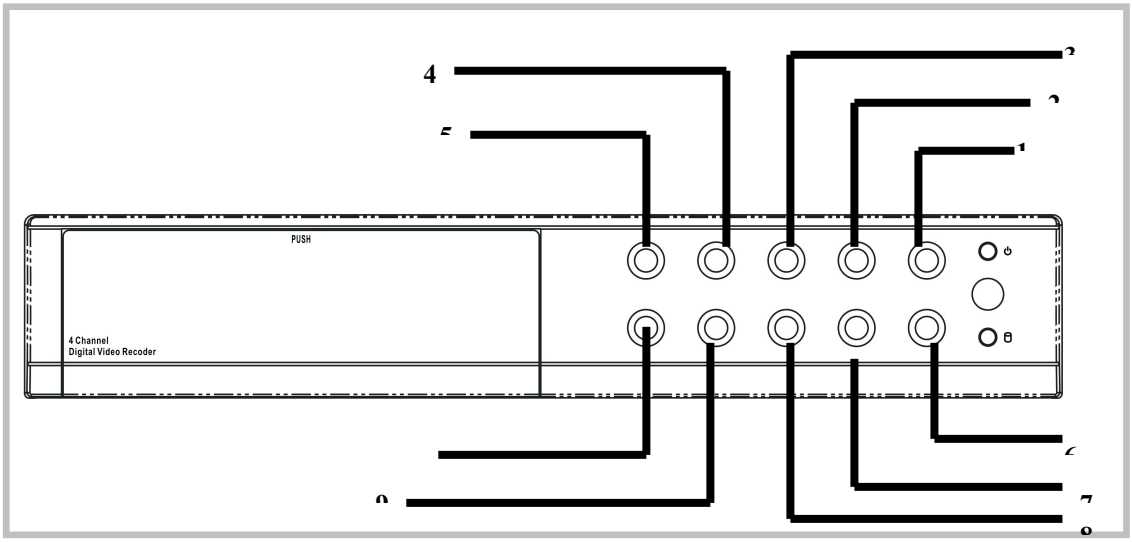
Introduction to Digital Video Recorder (DVR)

The digital video recorder (DVR) is for recording/retrieving video streams from up to 4 channels at the same time. It adopts a digital image compression technology to compress the input channel video streams, and uses HDD to record the compressed video stream.

The following operation guide explains how to operate/manage the DVR, and the following installation guide explains how to install DVR at your home or HDD into the DVR.

Hope you enjoy it, use it to protect your home, and eventually make your home as SAFE HOME.

Front Panel

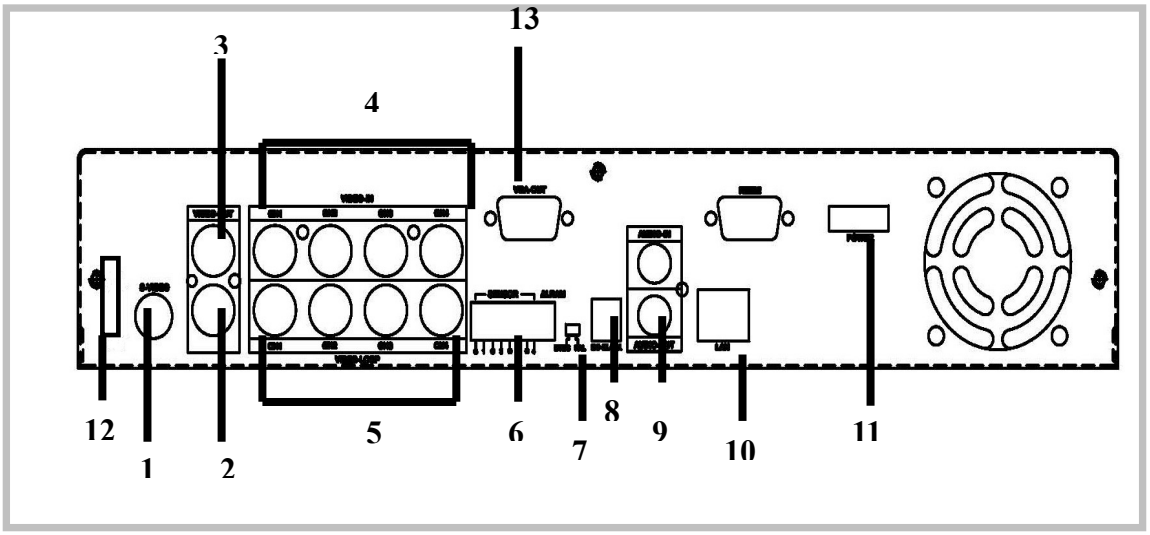


1. ● (Recording button): press to start recording.
2. ■(Stop recording/playback button):press stop recording/playback

(the authorized password is requested upon stopping record;
the default password is 555555: **button** ▫)

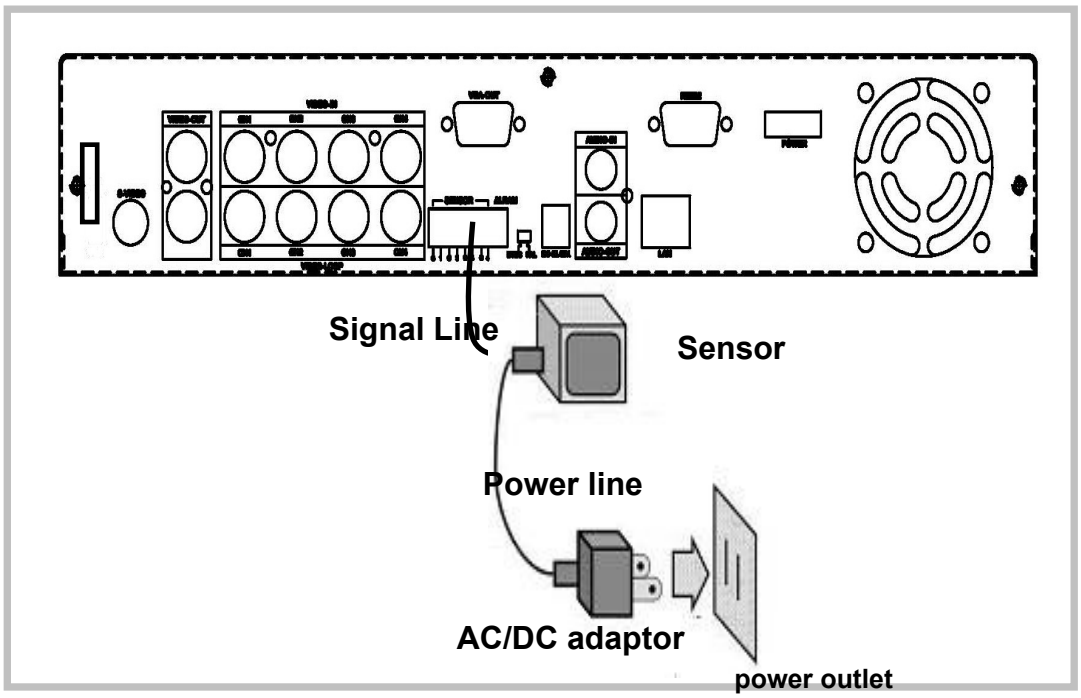
3. ⏩(Fast forward button): press to play the recorded video stream faster.
4. ⏯/⏸ (Playback button/Pause button): press to start playback and press to pause the video playback
5. ⏪Reverse:press to playback backward
6 ▯ (Select) button: press to change the setting value or enter into a sub menu.
7. ▼ down buttons: press to change menu field

Rear Panel

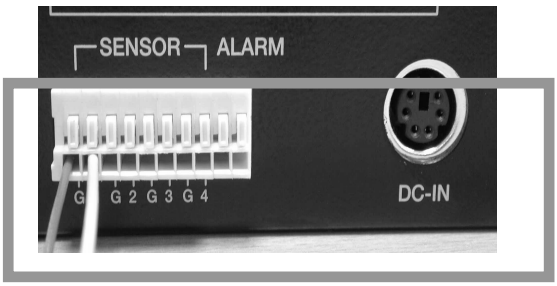


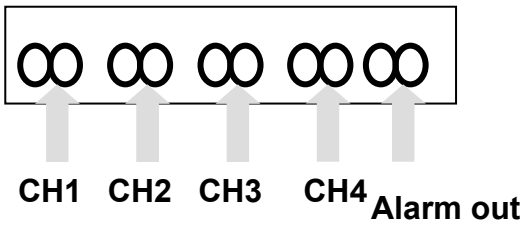
S Video
Video output
Monitor : Second Video output
Video input
Video loop-through
Sensor input/alarm output: 4 sensor inputs and one alarm output
NTSC/PAL switch
DC-in (12Voltage)
Audio-in/out
LAN(RJ45)
Power switch
USB host *(optional function)*
VGA output *(optional)*

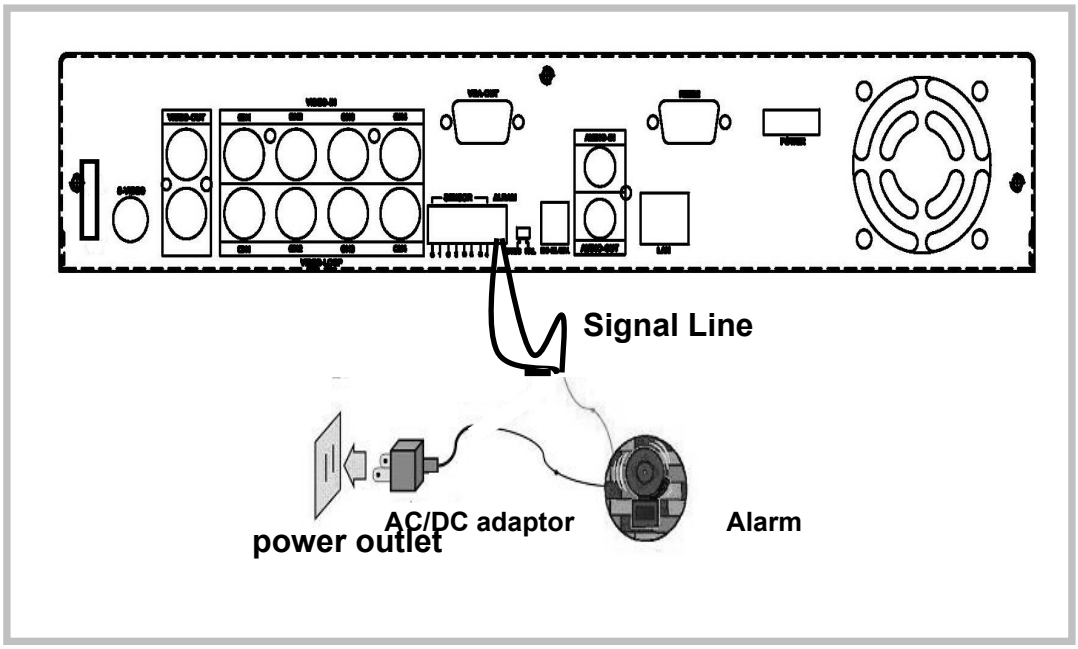
DVR Installation



3.Sensor Installation
The unit provides 4 sensor input for 4 channels. The sensor Installation procedures are as follows. There are two simple steps For the installation of the sensors.
i. Connect the sensor signal line: Connect the video signal line to the unit. The Sensor signal terminal is at the unit's back panel
ii.Connect the sensor adaptor jack into the sensor, and plug in the adaptor.

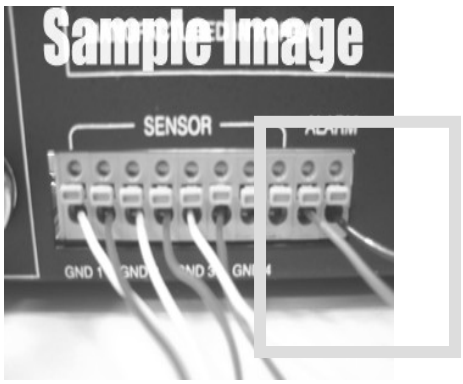






4. Alarm installation

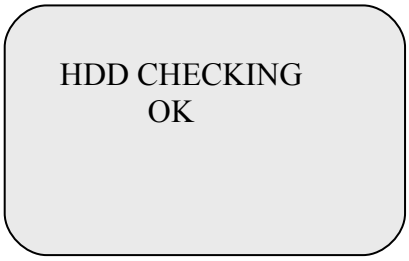
The unit provides 1 internal switch for sounding alarm when the sensor is Activated due to the unwanted entrance of anonymous visitor. The switch Is open at normal state, but, when the alarm is activated, the switch is closed
So that the alarm gets the power. The circuitry is shown as above figure.
There are two simple steps for the installation of the alarm
i. Prepare the power supply:the alarm needs a power supply, the power supply comes with the alarm
ii.Connect the alarm power line:the alarm power line is connected to the



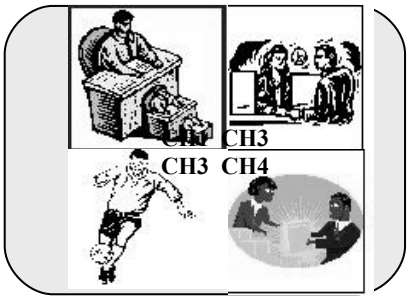
Power up the unit

After the unit is properly installed, the unit is ready to record and play. Then apply power and switch on. **Notice: Make sure the HDD is powered off before removing the drive**

After the unit is powered on, the unit is checking HDD for several seconds, the information will be displayed on the screen as right:



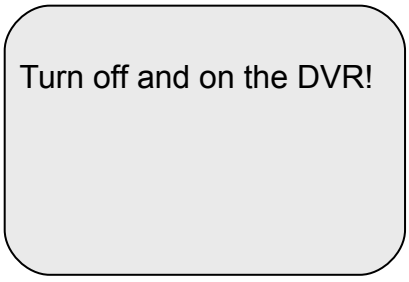
The unit will enter into real-time display mode shown as the right figure:



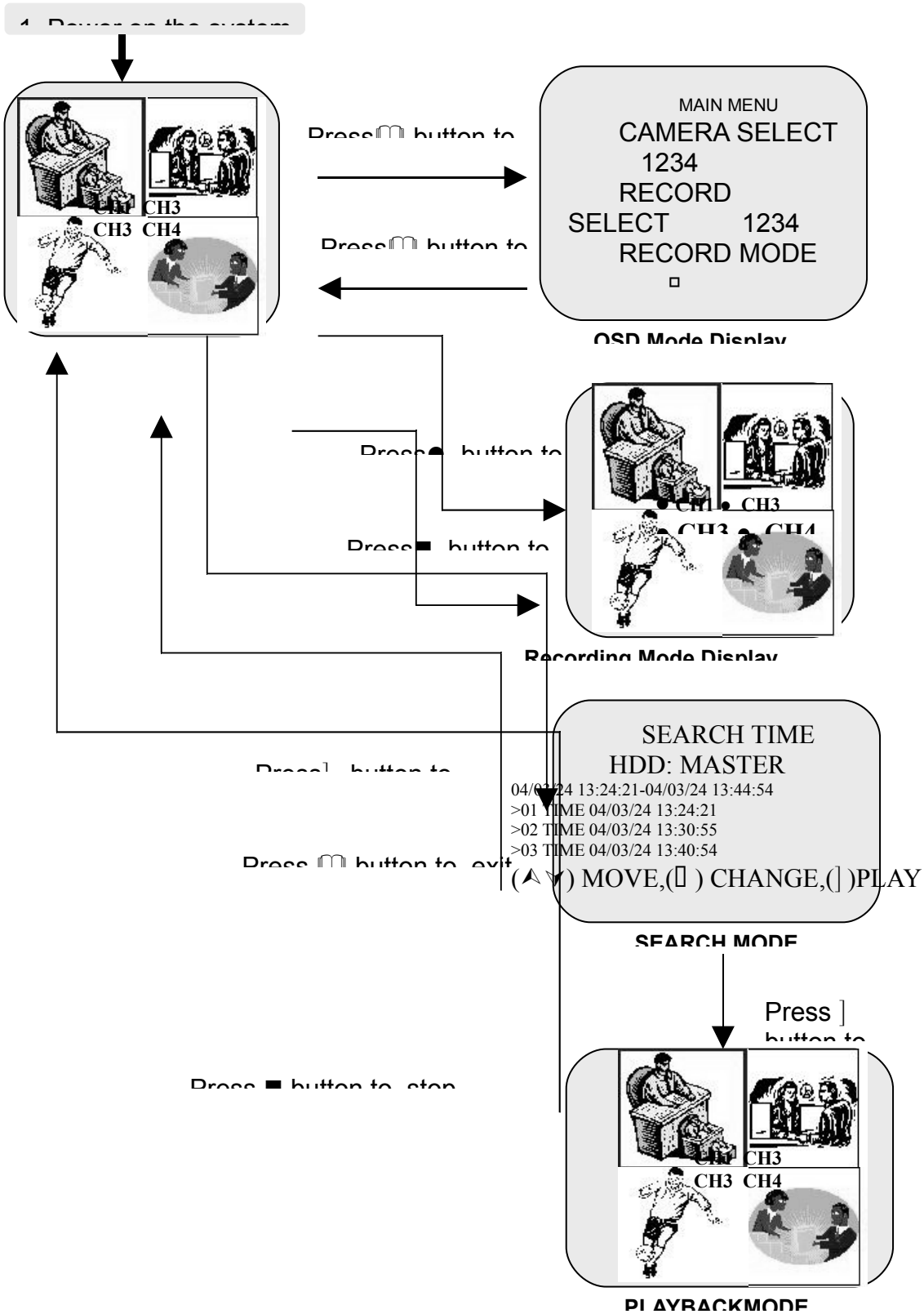
NOTICE

1. Make sure the HDD is off before removing the drive

2.Once you resume the initial setting, the right information will be displayed on the screen. Then turn off the unit and re-power on it.

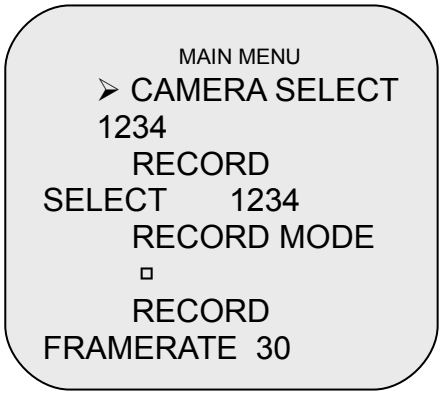


On-Screen Display



MAIN MENU

Press📖 to display menu option shown as right figure.



Operation Buttons

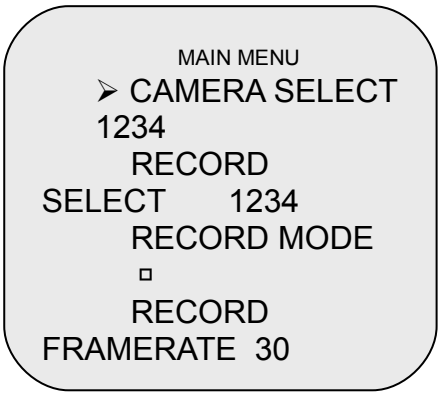
--- press to display menu option.

⑦⑧-- press to change menu field or change the unit's configuration values.

 --- press to select menu item or confirm the selection.

➢Please stop recording or playback before you enter into OSD menu.
➢You will be requested to enter password, while stopping recording.
➢***"NETWORK SETUP" is optional function which is only provided with LAN model***

CAMERA SELECT



The unit provides 4 camera inputs. You can use channel buttons on the front panel to select specified channel for real-time display.

You can use " " button or channel buttons for different combinations for channel display.

Example:

1. When you choose (----), all cameras are off
2. When you choose (1234), all cameras are displayed.
3. When you choose (---4), only the fourth channel is displayed.

NOTICE

VIDEO LOSS !

"VIDEO LOSS" signal will be displayed, and the built-in alarm buzzer will be triggered to sound, while no video connection or connection failure

NOTICE

Channel Display Control

In each mode(▫) mode, you can use the " ▫" button to display Full-screen format of each channel by rotation.

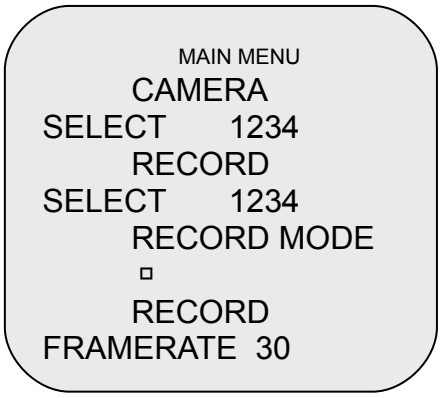
RECORD SELECT

MAIN MENU
CAMERA SELECT
1234
➢ RECORD
SELECT 1234
RECORD MODE
▫
RECORD
FRAMERATE 30

Selecting channel on this menu option is same as "CAMERA SELECT" options.
Only selected camera will record real-time events during recording period

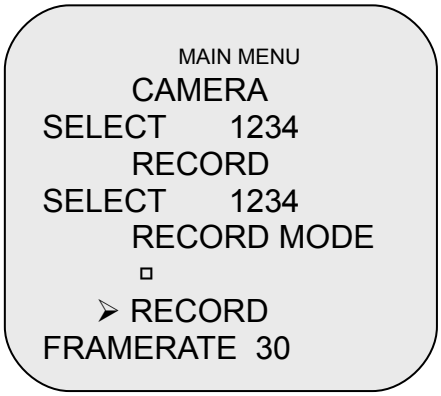
RECORD MODE

MAIN MENU
CAMERA SELECT
1234
RECORD
SELECT 1234
➢ RECORD MODE
▫
RECORD
FRAMERATE 30



There are two kinds of recording mode : ▫ (each mode; full screen mode)& ▫ (quad screen mode). when you set to ▫ mode, you can view the full-screen display of one specified channel. When you set to ▫ mode, quad-screen will be displayed.
Please use ▲▼ buttons of

RECORD FRAMRATE



There are 9 different frame rate settings for operation: (30fps,15fps,10fps,7fps,5fps,4fps,3 fps,2fps,1fps; But the unit is set to 30fps in the factory)

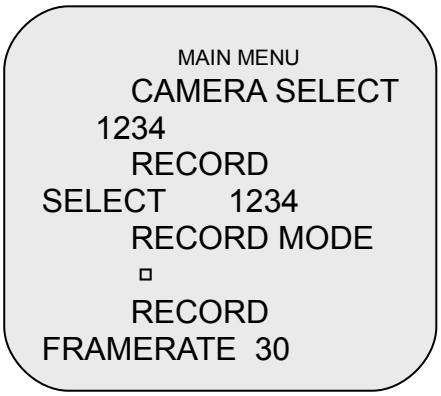
Please use ▲▼ buttons of front panel to select mode and then enter ▯ to confirm

NOTICE

RECORDING FRAME RATE

The higher the record frame rate is, the more natural look will be displayed on the screen on playback mode.
But the lower the record frame rate is, the more you can save the space on HDD.

VIDEO QUALITY



There are 3 different video quality settings for operation: Normal, Low, High

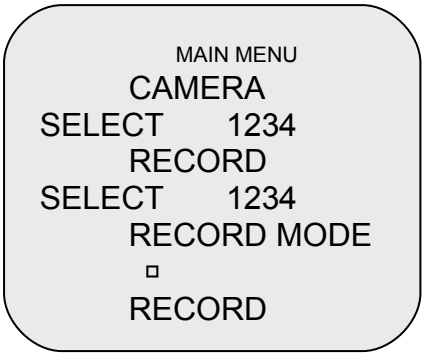
Please use ▲▼ buttons of front panel to select mode and then enter ▯ to confirm the selection

NOTICE

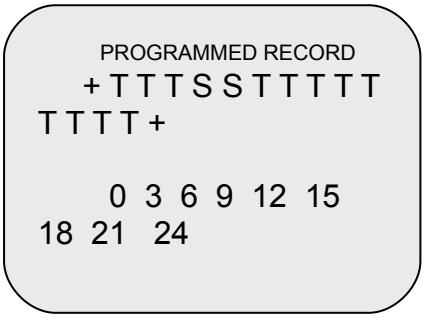
DIFFERENT VIDEO QUALITY SETTINGS ON HDD CAPACITY

The higher the video quality is, the clearer images the unit plays.
But the lower the video quality is, the more you can save the space on HDD.

RECORD SCHEDULE



Enter into this option to change a recording schedule during a day (24-hour period) .



Numbers above indicate the time duration of 24 hours.
(T) Letter indicates recording.
(S) Letter indicates sensor recording. It means the unit starts recording as the attached sensors being triggered during this period.
(--) Recording is off during this duration.

SETTING EXAMPLE:
0:00 ~ 7:00 SENSOR RECORDING
7:00 ~11:00 RECORDING DISABLED
11:00 ~18:00 RECORDING
18:00 ~24:00 SENSOR RECORDING

+ S S S S S S - - - - T T T T T T T S S S S S S +
: : : : :
0 6 11 18 24

NOTICE

SENSOR RECORDING INSTALLATION
The unit provides 4 alarm inputs which can be configured as normal close, normal open, motion detection +NC and motion detection+NO over "SENSOR SETUP" menu option. (Please refer to P. 18 for the sensor setup). After the sensor configuration, please go back to " RECORD SCHEDULE" menu to

SUB MENU

SUB MENU
➢PASSWORD CHANGE
TIME SET
DATE DISPLAY FORMAT
SEQUENTIAL TIME
BRIGHTNESS ADJUSTMENT

Enter into this option to change password, time /date setting, date format and enable the connection between the unit and PC over USB interface.

PASSWORD CHANGE
CURRENT PASSWORD: -------
NEW PASSWORD:-------
PASSWORD CONFIRM:--------

PASSWORD CHANGE .

You enter into "PASSWORD CHANGE", a password change input menu replaces the "SUB MENU" (The default password is 555555)
When the new password is accepted, the board will flash the following screen message:
PASSWORD changed!!!
The message will blink 5 times. Then the display goes back to SUB MENU.
If the password was not accepted, the unit

NOTICE

FRONT PANEL BUTTONS DEFINITION

▫ means "5" ⏸/▯means"b"
▯ means "6" 🕮means "C"
⏮ means "7" ▲means "D"

¢ means "8" ▼means "E"
▯means "F" ⏭ means "0"

TIME SET

TIME
2004/03/21 03:23:21

PRESS (▲▼), **THEN (↵)**

Enter into this option to change date and hour.

DATE DISPLAY FORMAT

DATE DISPLAY
FORMAT

PRESS (▲▼), THEN (↵)

The unit provides yyyy/mm/dd or dd/mm/yyyy variant which depends on the regional preference.

AUDIO RECORD

AUDIO RECORD [ON]

PRESS (▲▼), **THEN (↵)**

Use this menu to either turn on audio recording or off

➢ ***"AUDIO RECORD" is optional function which is only provided with LAN model.***

AUDIO MUTE

AUDIO MUTE [ON]

PRESS (▲▼), **THEN (↵)**

Use this menu to either turn on sounding or off

SEQUENTIAL TIME

SEQUENTIAL
TIME

Use this menu to specify each channel display dwell time. Dwell time settings determine from 1 sec to 9 sec between displays for 4 channels.

Note: Please press "□" to

BRIGHTNESS ADUSTMENT

Use this menu to adjust each camera's brightness and contrast

BRIGHTNESS ADJUSTMENT

CHANNEL-1	[2]	[3]
CHANNEL-2	[3]	[5]
CHANNEL-3	[5]	[7]
CHANNEL-4	[6]	[8]

HDD SETUP

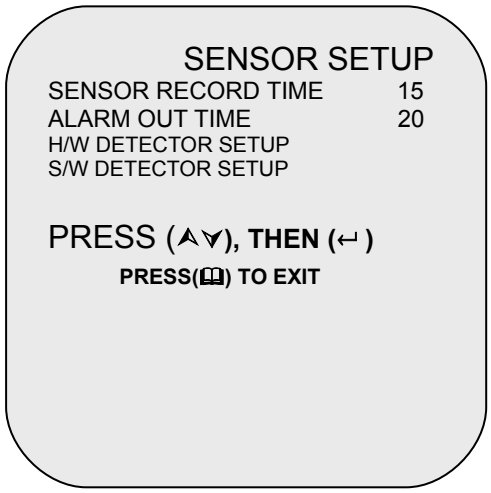
HARD DRIVE SETUP

OVERWRITE ENABLED YES
MASTER HDD SIZE 40000MB
MASTER HDD USED 0MB 0%
MASTER HDD FORMAT
SLAVE HDD SIZE

PRESS (▲▼), **THEN (↵)**
PRESS(🕮) TO EXIT

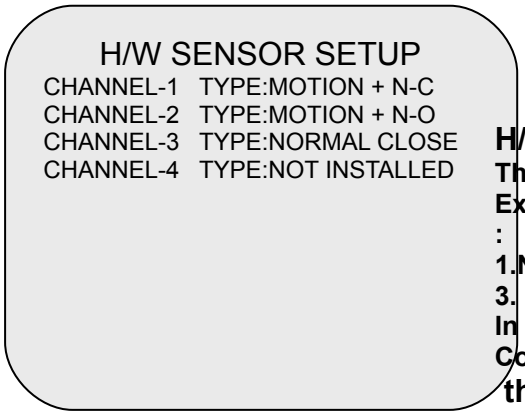
OVERWRITE ENABLED:
If you choose "YES", the unit will continue recording and overwrite the recorded data when HDD's space is full
If you choose "NO", the unit will stop

SENSOR SETUP



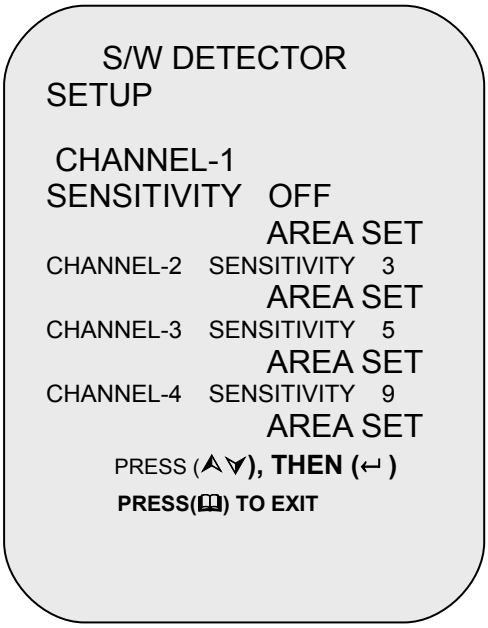
SENSOR RECORD TIME:
Recording duration once sensor Being triggered.

ALARM OUT TIME:
It controls how long (in second) the alarm sounds after being triggered.



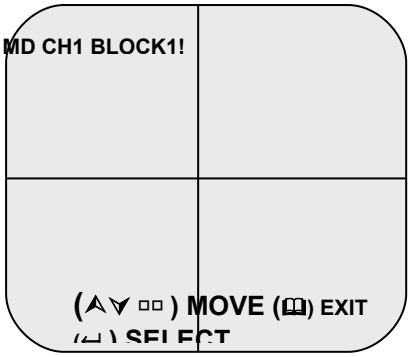
H/W SENSOR SETUP
The unit provides 3 different modes for External sensor facilities :
1.Not installed. 2. Normal open.
3. Normal close.
In normal open mode, the cable line Connected between the sensor and the unit is cut off by an intruder, the unit starts recording.

In normal close mode, the cable line connected between the sensor and the Unit is cut off by an intruder , the unit stops recording



MOTION SENSITIVITY SETUP

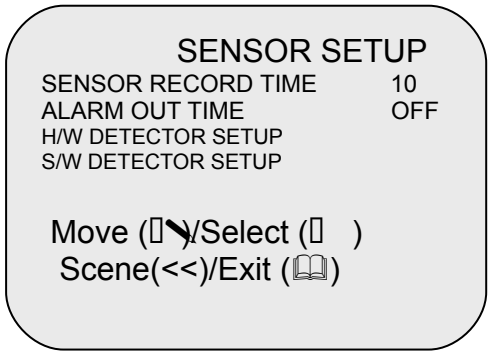
Use this menu to adjust the sensitivity of each channel.
(0 stands for highest Sensitivity, but 5 is for lowest sensitivity.) .



AREA SET

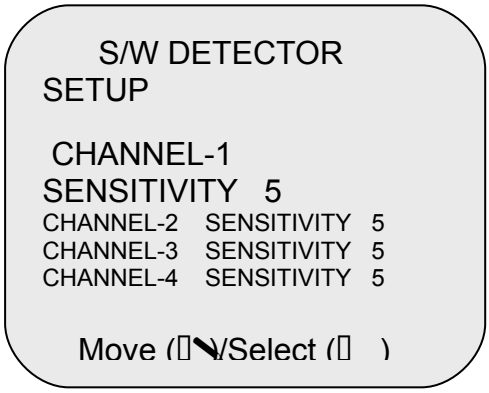
Enter this menu to select out one or two blocks (maximal!).
Step1. Use ▲▼ ◻◻ buttons to move the cursor to the position of the 1st block
Step2. After positioning, enter ◻ button to confirm

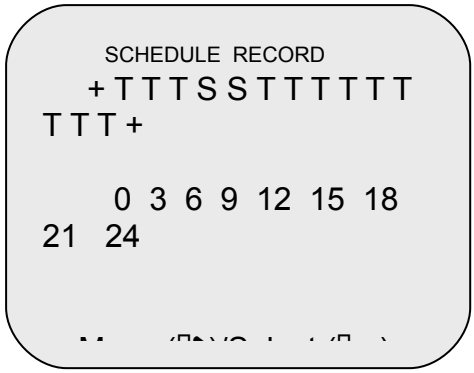
How to operate Motion detection recording



Follow the steps as below to activate motion-detection recording.
1.Please set the period of Alarm out time
2.Please go to S/W DETECTOR SETUP under "SENSOR SETUP" menu as the left figure shown.
3. Specify the sensitivity of each channel.
4. After the selection, please be back to MAIN MENU and go to "SCHEDULE RECORD" to power on the alarm setting.

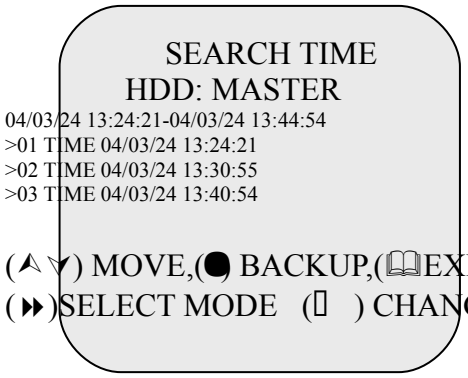
<u>Notice: The setting under "Record Schedule" is necessary for starting the operation of motion detection recording.</u>





PLAYBACK

Please use the front panel buttons to operate various playback functions.



Press " ⏸/▯" and "📖"button, then the playback time /events selection menu as the left figure appears on the screen. Or you can simply press " ⏸/ ⎦ " to directly start playing.

NOTICE

1. Please stop recording before playback.

2. Because the events selection is default setting, so you need to press

CONTROL BUTTONS

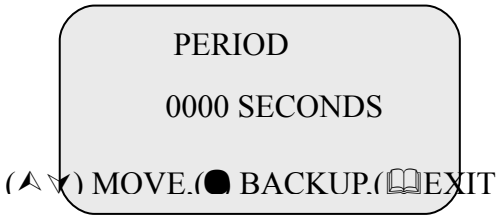
1. ▶▶ (fast forward button):
Press this button to play the recorded stream faster.
The unit provides three levels of fast forward

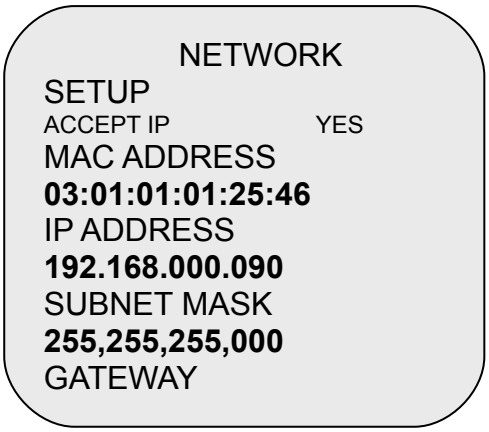
The unit provides one USB Host port to simple backup data on Pen drive. Please follow the steps below:

Step 1. Connect the USB pen drive to DVR

Step 2. press "" button to start backup function, and then follow

Notice: ***Please stop recording before your backup!***





The first option “enabled network client”, please make sure is set to YES

2) MAC setting will not need to be altered.

3) *IP address (a static IP address) will need to be set to the DVR IP address you planning to allocate to, while you connect to Internet.

4) Subnet mask will need to be obtained from the routing device.

#Gateway IP address (IP address A) will need to be obtained from the routing device. Port Number be specified the pair which is also adapted to the connected Router.

Please check with your M.I.S staff or administrator to enter the setting of MAC ADDRESS, IP ADDRESS,SUBNET MASK and GATEWAY Or please refer the left figure as a example for your reference

After configuring Networking settings, you Can start to remote monitor via PC client

Notice:

1.PC Minimum requirements of Networking :

CPU: 1 GHZ or above System Memory: 256MB or above VGA memory: 32MB OS: Window2000/XP

DDNS setting-DYNDNS.ORG

1.Provider: Pick dyndns.org
2.Hostname:the registered
3.hostname form DYNDNS.ORG
4.Username:the registered username form DYNDNS.ORG
5.Schedule updates: the period between synchronize new IP address and DDNS server

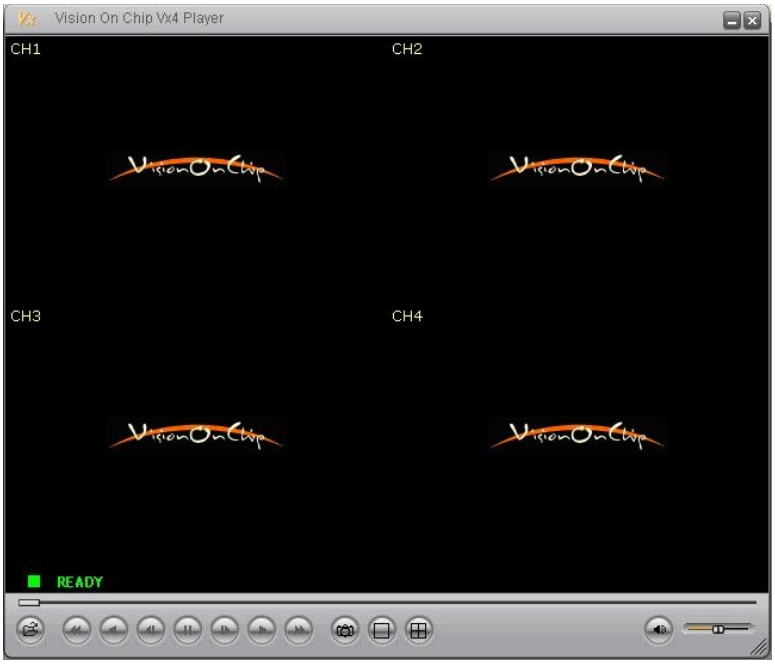
Regulatory

FCC Certification
This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC rules. These

Note: Before installing PC viewer into your PC, please make sure DirectX9.0 or above, and the updated version of Service pack!!!

Install and Setup

Please Insert the DVR CD into CD-ROM, and the computer will auto-run the install program as below, please click "USB Host



Please follow the steps below to complete the installation of pc viewer:

Please install USB pen drive into your pc

Please install PC viewer software into your PC (*This software currently supports Windows2000 and Windows XP!)* and enter into the software, then you will see a dialog box as above(figure 1) appear on the screen.

Please right click on the mouse to enter " Open disk " to select out the USP pen drive disk

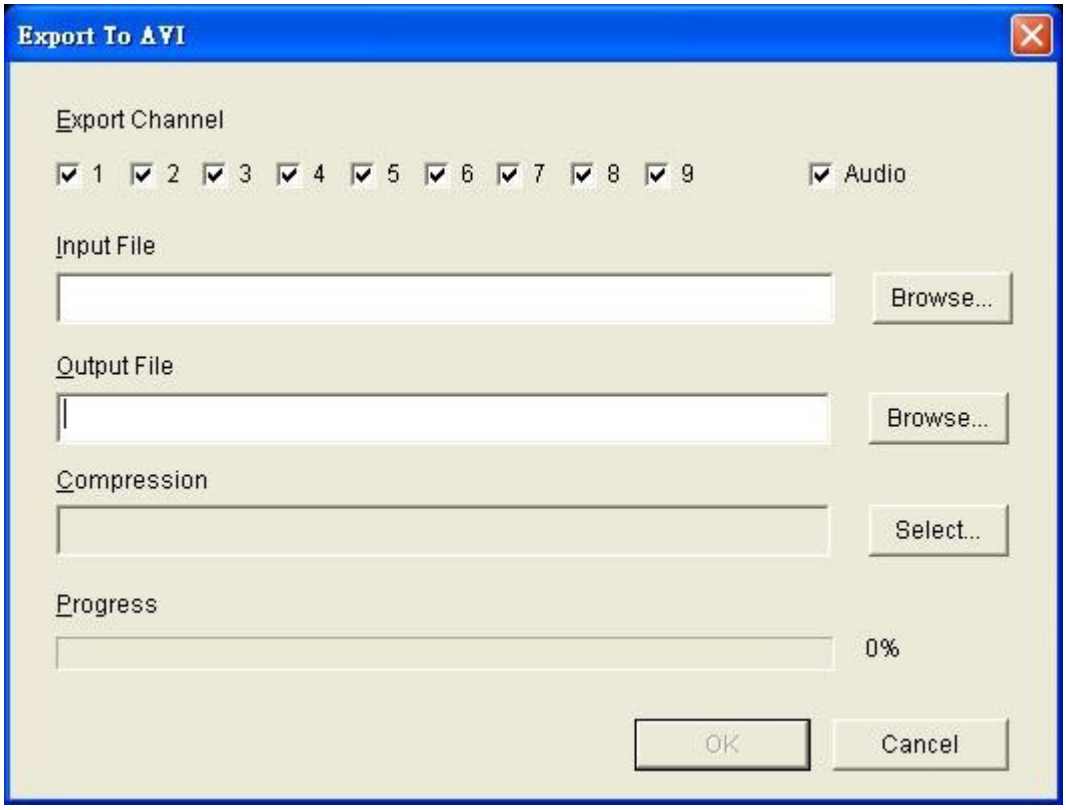
4. Please press play button to start the playback

5. A. Button for Fast forward playback speed : 5 levels of playback speed: 1, 4, 16, 32,64

b. Button for advancing one single frame

c. Button for one single frame backward

6. Right Click on the mouse to select "export " for AVI conversion , then you will see the following dialog box for saving the AVI file. After specifying the file name and confirmation, please click on " Backup to AVI" to start the conversion.

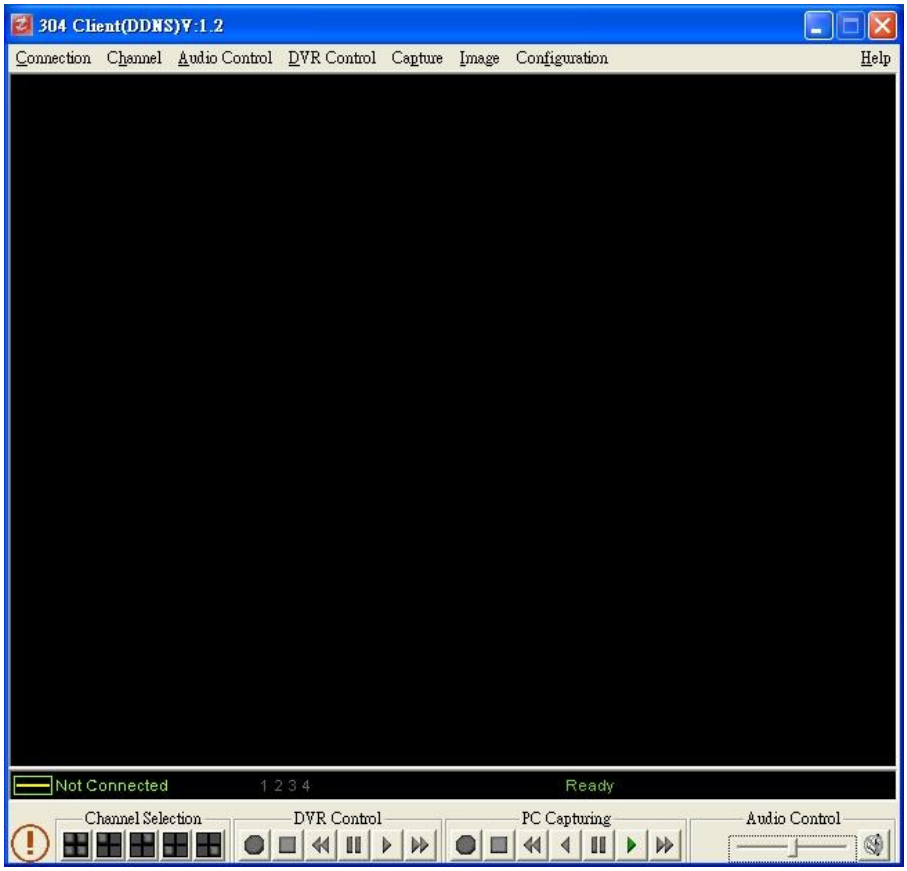


This dedicated remote PC client(DDNS) software allows you from a remote location to view live and recorded video over Internet. Also, you can capture,convert the video from the unit into AVI file or JPEG file, or play the stored video later on. Please follow the instructions below to use PC client.

Install and Setup

Please Insert the DVR CD into CD-ROM, and the computer will auto-run the install program as below, please click "PAL /NTSC

After you install PC client software into your PC, the Main window will appear on screen:



Main Window of PC client software (DDNS)

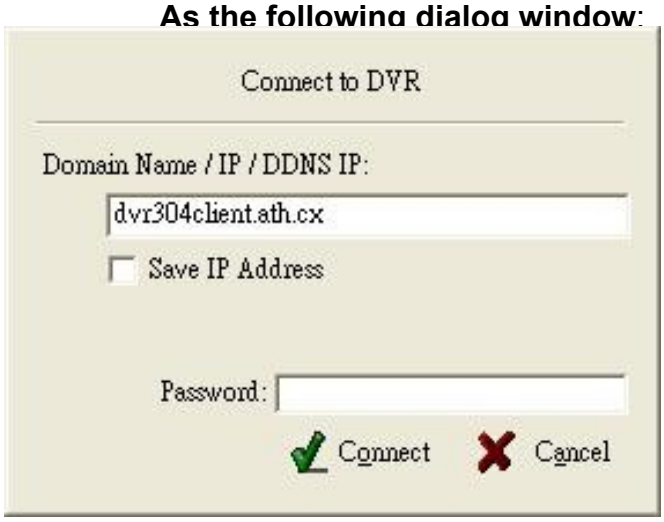
1. How to connect to the DVR

click on "Connect" option on Main window

Click on " " to enter into

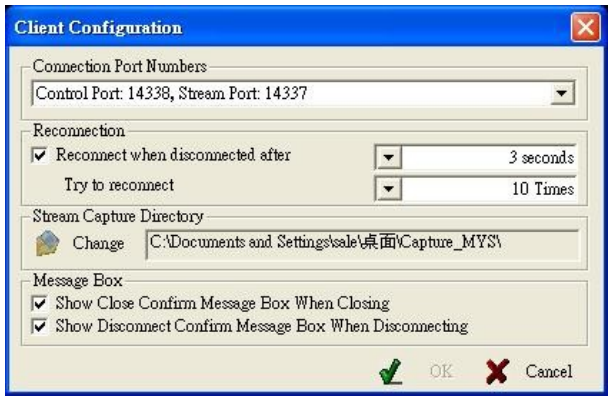
"DVR Client connection manager"

As the following dialog window:



1. DVR IP: this unit supports DDNS connection, please complete the registration by DDNS service first, then install the setting of DVR and PC client!
2. Enter the registered DDNS IP
3. Password : The password is same password used for formatting the DVR's Hard Drive. The default value is 555555 .

2. Connection Port number



Please press F9 to enter the right dialog box to set the control port and stream port which is also adapted to your ADSL's router.

3. Connection Status:

When successfully connected, you would see" Connected" sign. This window also displays connecting speed.

To disconnect, simply click " Disconnect "
To close the application, click " Close Window"

3. DVR control

The panel shown as the following figure operates exactly as the remote DVR operational button allow you to control

4. Capture & Playback on you PC

4-1 Capture video data
When you click "REC" button, it will start to record the incoming video on your PC hard disk. The DVR client creates " steam_files"folder where the execution file is located. When the client is recording, the Capture & Play status indicator would show the current status, REC.

4-2 Playback
After recording is finished, click" Play" button to play the recorded video stream. Then you will see a stream file list of the video stream files previously captured.

5. DVR management

This option "Configuration" enables you to adjust remote DVR's operation setting : Video Quality, Record Frame rate, Alarm On Duration, Alarm record Duration, Input Channels, Record Channels, DVR system time setting and Record Schedule. All of settings operate as you do with DVR itself. Notice: For the record mode change can be made only on DVR, so the display shows the current DVR record mode on connection.

The following is the recording time vs video quality settings table for your reference

Frame/Second		1	2	3	4	5	7	10	15	30
▫ MODE	HI	**897H**	**4 48H**	**2 99H**	**2 23H**	**1 79H**	**1 04H**	**89H**	**59H**	**29H**
	NORMAL	**1092 H**	**5 46H**	**3 64H**	**2 73H**	**2 18H**	**1 52H**	**1 09H**	**72H**	**36H**
	LO	**1365 H**	**6 82H**	**4 55H**	**3 40H**	**2 73H**	**1 91H**	**1 36H**	**91H**	**45H**
▫ MODE	**HI**	**690H**	**3 45H**	**2 30H**	**1 72H**	**1 38H**	**96H**	**69H**	**46H**	**23H**
	NORMAL	**840H**	**4 20H**	**2 80H**	**2 10H**	**1 68H**	**1 17H**	**84H**	**56H**	**28H**
	LO	**1050 7H**	**5 25H**	**3 50H**	**2 62H**	**2 10H**	**1 47H**	**1 05H**	**70H**	**35H**

NTSC format

Frame/Second		1	2	3	4	6	8	12	25
▫ MODE	HI	**4 48H**	**2 99H**	**2 23H**	**1 79H**	**1 04H**	**89H**	**59H**	**29H**
	NORMAL	**5 46H**	**3 64H**	**2 73H**	**2 18H**	**1 52H**	**1 09H**	**72H**	**36H**
	LO	**6 82H**	**4 55H**	**3 40H**	**2 73H**	**1 91H**	**1 36H**	**91H**	**45H**
▫ MODE	**HI**	**3 45H**	**2 30H**	**1 72H**	**1 38H**	**96H**	**69H**	**46H**	**23H**
	NORMAL	**4 20H**	**2 80H**	**2 10H**	**1 68H**	**1 17H**	**84H**	**56H**	**28H**
	LO	**5 25H**	**3 50H**	**2 62H**	**2 10H**	**1 47H**	**1 05H**	**70H**	**35H**

PAL format

PS: The recording hours on 80GB HDD